

Application No. 09/620,177
Amendment Dated 3/30/05
Reply to Office Action of 12/30/04

This listing of claims will replace all prior versions, and listings, of claims in the application:

In the Claims:

1. (CURRENTLY AMENDED) A pipe coupling for interconnecting adjacent ends of first and second pipe sections, the end of the first pipe section having an annular corrugation, said coupling comprising:

a generally cylindrical metal sleeve having first and second sides, said sleeve being formed from a sheet material and having at least one rigid and radially inwardly directed annular corrugation formed across its width prior to securement of said sleeve about the first pipe section end, said annular corrugation being located [[adjacent]] closer to a free end of said sleeve on said first side thereof than a free end of said sleeve on said second side thereof;

said annular corrugation being disposed on said first side of said sleeve so as to be oriented perpendicular to a longitudinal axis of said sleeve and configured to cooperatively engage the annular corrugation on the first pipe section end when said sheet is wrapped around the first pipe section end to secure said sleeve on the first pipe section end and thereby prevent separation of said sleeve from the first pipe section; and

[[a]] an elongated tubular bell on said second side of said sleeve having an inner wall of [[generally]] substantially constant diameter along a substantial length thereof and being adapted to slidably receive in an axial direction the second pipe

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section end within said sleeve, with no portion of said sleeve extending radially inwardly between said annular corrugation and said bell so that the first and second pipe section ends are capable of abutting;

whereby said coupling is adapted to interconnect said adjacent ends of said first and second pipe sections.

2-5. CANCELED.

6. (ORIGINAL) The coupling of claim 1 wherein said bell includes a circumferential outwardly extending flange disposed about an outer edge of said bell.

7. (ORIGINAL) The coupling of claim 1 wherein the inner diameter of said bell is greater than the outer diameter of said second pipe section.

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8. (CURRENTLY AMENDED) In combination, a pipe coupling and first and second pipe sections, the end of the first pipe section having an annular corrugation, and said coupling comprising:

a generally cylindrical metal sleeve having first and second sides, said sleeve being formed from a sheet material and having at least one rigid and radially inwardly directed annular corrugation formed across its width prior to securement of said sleeve about the first pipe section end, said annular corrugation being located [[adjacent]] closer to a free end of said sleeve on said first side thereof than a free end of said sleeve on said second side thereof;

said annular corrugation being disposed on said first side of said sleeve so as to be oriented perpendicular to a longitudinal axis of said sleeve and configured to cooperatively engage the annular corrugation on the first pipe section end when said sheet is wrapped around the first pipe section end to secure said sleeve on the first pipe section end and thereby prevent separation of said sleeve from the first pipe section; and

[[a]] an elongated tubular bell on said second side of said sleeve having an inner wall of [[generally]] substantially constant diameter along a substantial length thereof and being adapted to slidably receive in an axial direction the second pipe section end within said sleeve, with no portion of said sleeve extending radially inwardly between said annular corrugation and said bell so that the first and second pipe section ends are capable of abutting;

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whereby said coupling interconnects said adjacent ends of said first and second pipe sections.

9. CANCELED.

10. (ORIGINAL) The combination of claim 8 further comprising a first gasket.

11. (PREVIOUSLY PRESENTED) The combination of claim 10 wherein said first gasket is a fluted gasket disposed circumferentially about an annular corrugation of said second pipe section, said fluted gasket adapted to contact and confront an inner surface of said bell when said second pipe section is slidably received by said bell.

12. (ORIGINAL) The combination of claim 11 further comprising a second gasket.

13. (ORIGINAL) The combination of claim 12, wherein said second gasket is an O-ring disposed circumferentially about an annular corrugation of said first pipe section, and wherein said O-ring contacts and confronts the inner surface of said first side of said sleeve when said first side cooperatively engages said first pipe section.

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14. (ORIGINAL) The combination of claim 12, wherein said second gasket is a flat gasket disposed circumferentially about an annular corrugation of said first pipe section, and wherein said flat gasket contacts and confronts the inner surface of said first side of said sleeve when said first side cooperatively engages said first pipe section.

15-17. CANCELED.

18. (ORIGINAL) The combination of claim 8 wherein said bell includes a circumferential outwardly extending flange disposed about an outer edge of said bell.

19. (ORIGINAL) The combination of claim 8 wherein the inner diameter of said bell is greater than the outer diameter of said second pipe section.

20. (ORIGINAL) The combination of claim 8 further comprising a sealant disposed on said first side of said sleeve, for adhering said first side of said sleeve to said first pipe section.

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21. (CURRENTLY AMENDED) A method of interconnecting adjacent ends of first and second pipe sections, the end of the first pipe section having an annular corrugation, the method comprising the steps of:

providing a metal sheet;

forming a rigid corrugation across the width of said sheet prior to securement of said sleeve about the first pipe section end;

wrapping said sheet into a cylindrical metal sleeve including a first side having said rigid corrugation oriented radially inwardly and perpendicular to a longitudinal axis of said sleeve and a second side having [[a]] an elongated tubular bell with an inner wall of [[generally]] substantially constant diameter along a substantial length thereof, said annular corrugation being located [[adjacent]] closer to a free end of said sleeve on said first side thereof than a free end of said sleeve on said second side thereof;

securing said sleeve about the first pipe section end during the wrapping step by cooperatively engaging said rigid corrugation of said sleeve with the annular corrugation of the first pipe section end to thereby prevent separation of said sleeve from the first pipe section; and

slidably receiving in an axial direction the second pipe section end within said bell to interconnect the adjacent ends of the first and second pipe sections, with no portion of said sleeve extending radially inwardly between said annular corrugation and said bell so that the first and second pipe section ends are capable of abutting.

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22. CANCELED.

23. (PREVIOUSLY PRESENTED) The method of claim 21 wherein said sheet is wrapped into said cylindrical sleeve and said first side of said sleeve is secured to said first section of pipe at a first location.

24. (ORIGINAL) The method of claim 23 wherein said second pipe section is slidably received by said bell at a second location remote to said first location.

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25. (CURRENTLY AMENDED) A pipe coupling for interconnecting adjacent ends of first and second pipe sections, the end of the first pipe section having an annular corrugation, said coupling comprising:

a generally cylindrical metal sleeve having first and second sides, said sleeve being formed from a sheet material and having at least one rigid and radially inwardly directed annular corrugation formed across its width prior to securement of said sleeve about the first pipe section end, said annular corrugation being located [[adjacent]] closer to a free end of said sleeve on said first side thereof than a free end of said sleeve on said second side thereof;

said annular corrugation being disposed on said first side of said sleeve so as to be oriented perpendicular to a longitudinal axis of said sleeve and configured to cooperatively engage the annular corrugation on the first pipe section end when said sheet is wrapped around the first pipe section end to secure said sleeve on the first pipe section end and thereby prevent separation of said sleeve from the first pipe section;

[[a]] an elongated tubular bell on said second side of said sleeve being adapted to slidably receive in an axial direction the second pipe section end within said sleeve, with no portion of said sleeve extending radially inwardly between said annular corrugation and said bell so that the first and second pipe section ends are capable of abutting;

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a gasket adapted to be disposed circumferentially about said second pipe section, said gasket adapted to contact and confront an inner surface of said bell when said second pipe section is slidably received by said bell; and

a radially inwardly directed annular projection disposed about the inner diameter of said bell, said annular projection adapted to engage said gasket and retain said second pipe section end within said bell;

whereby said coupling is adapted to interconnect said adjacent ends of said first and second pipe sections.

26. CANCELED.

27. (PREVIOUSLY PRESENTED) The coupling of claim 25 wherein said radially inwardly directed annular projection includes a gentle entry side angle on one side of said annular projection.

28. (PREVIOUSLY PRESENTED) The coupling of claim 27 wherein said radially inwardly directed annular projection includes a steep back angle on an opposite side of said annular projection.

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29. (PREVIOUSLY PRESENTED) The coupling of claim 25 wherein said bell includes a circumferential outwardly extending flange disposed about an outer edge of said bell.

30. (PREVIOUSLY PRESENTED) The coupling of claim 25 wherein the inner diameter of said bell is greater than the outer diameter of said second pipe section.

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31. (CURRENTLY AMENDED) In combination, a pipe coupling and first and second pipe sections, the end of the first pipe section having an annular corrugation, and said coupling comprising:

a generally cylindrical metal sleeve having first and second sides, said sleeve being formed from a sheet material and having at least one rigid and radially inwardly directed annular corrugation formed across its width prior to securement of said sleeve about the first pipe section end, said annular corrugation being located [[adjacent]] closer to a free end of said sleeve on said first side thereof than a free end of said sleeve on said second side thereof;

said annular corrugation being disposed on said first side of said sleeve so as to be oriented perpendicular to a longitudinal axis of said sleeve and configured to cooperatively engage the annular corrugation on the first pipe section end when said sheet is wrapped around the first pipe section end to secure said sleeve on the first pipe section end and thereby prevent separation of said sleeve from the first pipe section;

[[a]] an elongated tubular bell on said second side of said sleeve being adapted to slidably receive in an axial direction the second pipe section end within said sleeve, with no portion of said sleeve extending radially inwardly between said annular corrugation and said bell so that the first and second pipe section ends are capable of abutting;

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a first gasket disposed circumferentially about said second pipe section, said gasket contacting and confronting an inner surface of said bell when said second pipe section is slidably received by said bell; and

a radially inwardly directed annular projection disposed about the inner diameter of said bell, said annular projection engaging said first gasket and retaining said second pipe section end within said bell;

whereby said coupling interconnects said adjacent ends of said first and second pipe sections.

32. CANCELED.

33. (PREVIOUSLY PRESENTED) The combination of claim 31 wherein said first gasket is a fluted gasket disposed circumferentially about an annular corrugation of said second pipe section.

34. (PREVIOUSLY PRESENTED) The combination of claim 33 further comprising a second gasket.

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35. (PREVIOUSLY PRESENTED) The combination of claim 34, wherein said second gasket is an O-ring disposed circumferentially about an annular corrugation of, said first pipe section, and wherein said O-ring contacts and confronts the inner surface of said first side of said sleeve when said first side cooperatively engages said first pipe section.

36. (PREVIOUSLY PRESENTED) The combination of claim 34, wherein said second gasket is a flat gasket disposed circumferentially about an annular corrugation of said first pipe section, and wherein said flat gasket contacts and confronts the inner surface of said first side of said sleeve when said first side cooperatively engages said first pipe section.

37. (PREVIOUSLY PRESENTED) The combination of claim 31 wherein said radially inwardly directed annular projection includes a gentle entry side angle on one side of said annular projection.

38. (PREVIOUSLY PRESENTED) The combination of claim 37 wherein said radially inwardly directed annular projection includes a steep back angle on an opposite side of said annular projection.

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39. (PREVIOUSLY PRESENTED) The combination of claim 31 wherein said bell includes a circumferential outwardly extending flange disposed about an outer edge of said bell.

40. (PREVIOUSLY PRESENTED) The combination of claim 31 wherein the inner diameter of said bell is greater than the outer diameter of said second pipe section.

41. (PREVIOUSLY PRESENTED) The combination of claim 31 further comprising a sealant disposed on said first side of said sleeve, for adhering said first side of said sleeve to said first pipe section.